

REMARKS/ARGUMENTS

Status of the Claims

Claims 1-5 and 7-17 are pending in this application, with claim 1 being the only independent claim. Claims 15 and 18 have been cancelled without prejudice or disclaimer. No new matter has been added.

Reconsideration of the subject patent application in view of the following remarks is hereby requested.

Overview of the Office Action

The drawings have been objected to for a minor informality.

Claim 1 has been objected to for a minor informality.

Claims 1-5 and 7-14 have been rejected under 35 U.S.C. §103(a) as unpatentable over US 6,100,104 ("Haerle") in view of US 5,659,184 ("Tokunaga"), and further in view of US 2001/0038655 ("Tanaka").

Claims 9-11 have been rejected under 35 U.S.C. §103(a) as unpatentable over Haerle in view of Tokunaga, Tanaka and further in view of US 6,110,277 ("Braun").

Claims 16-18 have been rejected under 35 U.S.C. §103(a) as unpatentable over Haerle in view of Tokunaga, Tanaka and further in view of Literature by Hageman.

Formal Amendment Addressing Drawing Objection

To advance the allowance of the subject application, applicants have made certain formal changes to the application. Thus, claim 18 has been cancelled without prejudice or disclaimer to address the drawing objection, and claim 1 has been amended to address the informality raised in the Office Action.

Patentability of the Claimed Invention

A. Independent Claim 1

Independent claim 1 recites, *inter alia*, that “the windows of the mask material layer comprise a plurality of statistically distributed windows having varying forms and opening areas.”

In the Office Action, the Examiner acknowledged that the combination of Haerle and Tokunaga fails to teach the above-recited feature of independent claim 1 (see pg. 6 of the Office Action). The Examiner has nevertheless interpreted the openings 40 in the mask 4 of Tanaka as being statistically distributed in the mask 4 and alleges that it would have been obvious to apply Tanaka’s mask 4 to modify Haerle and arrive at the claimed invention. *Id.*

Based on the following detailed discussion, applicants disagree with this interpretation and assertion regarding the disclosure of Tanaka.

Tanaka teaches a semiconductor device having an insulator mask 4 formed with openings 40. Tanaka describes the openings 40 in the mask 4 shown in Figs. 9A and 9C as follows:

The pattern (openings 40) of the insulator mask 4, however, is not striped as shown in Fig. 9B, but includes a plurality of rectangular openings (window regions) arranged two-dimensionally at predetermined intervals. (see para. [0127]; emphasis added)

[T]he openings (also called the window regions) in the insulating film 4 for exposing the surface of the crystal region constituting a base are shaped in quadrangle such as square or rectangle or in hexagon including equilateral hexagon, and arranged at predetermined regular intervals. (see para. [0129]; emphasis added)

Both Fig. 9A and Fig. 9C of Tanaka show mask windows 40 that have predetermined shapes and are arranged at predetermined regular intervals.

The cited portions of Tanaka do not teach applicants’ claimed statistically distributed windows having varying forms and openings, as asserted in the Office Action. In contrast, the openings 40 in the Tanaka mask 4 are formed both with a predetermined shape and at predetermined regular intervals. These predeterminedly shaped and located openings 40 of

Tanaka cannot properly be considered to be "statistically distributed windows" and have "varying forms and opening areas," as expressly required by and recited in independent claim 1. Tanaka therefore does not teach or suggest this feature of independent claim 1.

Accordingly, contrary to the assertion set forth in the Office Action, Tanaka fails to remedy the Examiner-acknowledged deficiencies of the applied combination of Haerle and Tokunaga. Independent claim 1 thus patentably distinguishes over the cited combination of Haerle, Tokunaga and Tanaka and is allowable for at least this reason.

Moreover, it would not be obvious for the person of skill to modify the mask layer 4 of Haerle by a mask layer having statistically distributed windows of varying forms and opening areas, as alleged in the Office Action, even if, *arguendo*, Tanaka did teach statistically distributed windows of varying forms and opening areas -- which it does not. In Haerle, the windows 10 in its mask layer 4 are each formed so as to have "two mutually opposite, plane-parallel side surfaces 7, which define the two laser mirror surfaces 8, lying plane-parallel to one another, of the edge-emitting laser structures 2" (see col. 8, ll. 8-11 of Haerle). As is apparent to those skilled in the art, the windows 10 of Haerle must have such a predetermined form and relationship with plane-parallel side surfaces 7 so that the windows 10 form laser mirrors. This is fundamental to the construction and operation of the Haerle device. To modify the windows 10 of Haerle to render them statistically distributed and of varying forms and opening areas, as proposed in the Examiner's reference combination, would render the device of Haerle unsatisfactory (if not inoperative) for its intended purpose. This cannot support a proper secondary reference-based modification or substitution as the Examiner has proposed. (see MPEP § 2143.01(V)).

Thus, the cited combination of Haerle, Tokunaga and Tanaka does not in fact teach or suggest the above-recited claim feature of independent claim 1. Independent claim 1 is therefore

deemed to patentably distinguish over the cited combination of Haerle, Tokunaga and Tanaka and to be allowable on this additional basis.

In view of the foregoing, the 35 U.S.C. §103(a) rejection of independent claim 1 should be reconsidered and withdrawn.

B. Dependent Claims 2-5 and 7-17

Claims 2-5 and 7-17 depend, directly or indirectly, from allowable independent claim 1 and thus are each deemed to be allowable therewith. In addition, these dependent claims include features that serve to still further distinguish the claimed invention over the cited prior art.

Conclusion

In view of the foregoing, reconsideration, withdrawal of all rejections and allowance of all pending claims are respectfully solicited. Should the Examiner have any comments, questions, suggestions, or objections, the Examiner is requested to telephone the undersigned to facilitate an early resolution of any outstanding issues.

No fees or charges are believed to be required with this submission. However, if any such fees or charges are required at this time, they may be charged to our USPTO Deposit Account No. 03-2412.

Respectfully submitted,
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